

REMARKS

Applicants acknowledge receipt of the Examiner's Office Action dated November 1, 2007, having a shortened statutory period ending February 1, 2008. Claims 1 and 15 have been amended.

Rejections under 35 U.S.C. §112

Claim 32 is rejected under 35 U.S.C. §112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which Applicant regards as the invention. Specifically, Examiner asserts that, as recited in Claim 32, "wherein the first data volume and the second data volume are neither point-in-time copies nor modified point-in-time copies of each other" as being indefinite. Examiner bases his reasoning on the fact that independent Claim 1 (on which Claim 32 depends) recites "refreshing the second data volume to the data contents . . . that existed at time T" makes the second data volume a point-in-time copy of the first data volume. Applicants have cancelled Claim 32, which renders Examiner's rejection moot. Applicants respectfully requests that the rejection be withdrawn.

Rejections under 35 U.S.C. §102

Claims 1, 9, 15, 23, and 32 are rejected under 35 U.S.C. §102(e) as being anticipated by Eshel et al., U.S. Publication No. 2003/0158862 (Eshel). After careful consideration of Examiner's remarks, Applicants assert that Claims 1, 9, 15, 23, and 32, as now amended, are not rendered unpatentable by the cited sections of Eshel in view of the arguments herein.

Exemplary Claim 1 recites "maintaining first and second data volumes, wherein the first data volume is unrelated to the second data volume in that the second data volume is not a point-in-time copy or a modified point-in-time copy of the first data volume". Example support for the amendments to exemplary Claim 1 and similar independent Claim 15 can be found in paragraph [0010] of the present Specification. Examiner asserts that paragraphs [0127] and [0130] of Eshel disclose the recited elements of Claim 1. Paragraph [0127] of Eshel discloses:

In the exemplary embodiments, on the other hand, a file system snapshot is a logical copy of the file system content as of a single point in time. As a record of a previous state of the file system, a snapshot is useful, for example, to allow a user to retrieve an old copy of an accidentally deleted file (undelete). Another common use of snapshots is to back up a file system to tape while allowing continued read/write access to the file system during the backup process. Creating a snapshot in some of the exemplary embodiments does not require making a physical copy of all file system data at the time of snapshot creation. Instead, copying of file data is deferred until the next time the data is modified (a process referred to as “copy-on-write”). This makes snapshots more efficient, because it reduces the time it takes to create a snapshot as well as the disk space required to keep a snapshot.

Paragraph [0130] of Eshel discloses:

These embodiments of the present invention create a hot standby file system by first generating a snapshot of the original (source) file system and transferring the entire data set for that snapshot to a second file system in order to create an identical copy of the original file system (i.e., a mirror file system). These embodiments then periodically bring the standby or mirror file system up-to-date by generating new snapshots of the original file system and determining the changes between these new, more recently captured or generated snapshots and the state that was captured by a previous snapshot of the original file system that had been transferred to the mirror file system. The original file system generates a set of changes that are then communicated and applied to the standby file system in order to bring the standby file system up to the state of the new snapshots captured on the original file system. The original file system snapshot and the set of changes that are generated by these file systems contain tags to ensure completeness in the mirror file system by identifying the order of creation or the order in which these set of changes were applied. In this description, the term “restore” indicates a file system has been brought to the state of another file system by processing a dataset that represents an entire snapshot from that other file system. The term “apply” indicates that a file system has been updated to a more recent state of another file system by processing a set of changes that was generated between two snapshots on the other file system.

As clearly shown, the cited sections of Eshel discloses a system of creating a hot standby file system. A snapshot (“point-in-time copy”) of the data stored in an original file system (“first data volume”) is generated and transferred to a second file system. This means that the data stored on the second file system (“second data volume”) is a snapshot (“point-in-time copy”) of the data stored in the original file system (“first data volume”). Therefore, nothing in the cited sections of Eshel discloses (or renders obvious) “maintaining first and second data volumes,

wherein the first data volume is unrelated to the second data volume in that the first data volume is not a point-in-time copy or a modified point-in-time copy of the second data volume”, as recited in exemplary Claim 1. Therefore, exemplary Claim 1, similar independent Claim 15, and all dependent claims are not rendered unpatentable by the cited sections of Eshel. Applicants respectfully request that the rejection be withdrawn.

Rejections under 35 U.S.C. §103

Claims 4-5, 8, 10-12, 18-19, 22, and 24-25 are rejected under 35 U.S.C. 103(a) as being unpatentable over Eshel as applied to Claims 1, 9, 15, 23, and 32 above, and in view of Veritas (Article entitled “Veritas Flashsnap Point-In-Time Copy Solutions,” dated June 24, 2002 (Veritas)). Applicants assert that Claims 4-5, 10-12, 18-19, 22, and 24-25 are not rendered unpatentable by the combination of Eshel and Veritas by virtue of the dependencies on allowable independent Claims 1 and 15. Applicants respectfully request that the rejections be withdrawn.

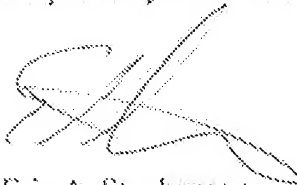
Claims 6-7, 13, 20-21, and 26 are rejected under 35 U.S.C. 103(a) as being unpatentable over Eshel as applied to Claims 1, 9, 15, 23, and 32 above, and in view of Veritas as applied to Claims 4-5, 8, 10-12, 18-19, 22, and 24-25, and further in view of DeKoning, U.S. Patent No., 6,691,245 (DeKoning). Applicants assert that Claims 6-7, 13, 20-21, and 26 are not rendered by the combination of Eshel, Veritas, and DeKoning by virtue of the dependencies on allowable independent Claims 1 and 15. Applicants respectfully request that the rejections be withdrawn.

CONCLUSION

Applicants submit that all claims are now in condition for allowance, and an early notice to that effect is earnestly solicited. Nonetheless, should any issues remain that might be subject to resolution through a telephonic interview, the Examiner is requested to telephone the undersigned.

If any extensions of time under 37 C.F.R. § 1.136(a) are required in order for this submission to be considered timely, Applicant hereby petitions for such extensions. Applicant also hereby authorizes that any fees due for such extensions or any other fee associated with this submission, as specified in 37 C.F.R. § 1.16 or § 1.17, be charged to deposit account 502306.

Respectfully submitted,



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